

**CHANGE
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CLIMATE**

Edmonton



Butterwick



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effect
HOME BUILDERS



Eco-Solar Home Tour 2020

Saturday 6 June, Noon to 4:30 pm

Westmount EE Home

Tour Day: Saturday 6 June

Address:

Hosts: Richlyn Homes

Parking: On west side of street

Energuide Rating: 60 GJ/year

Summary points why people need to see your home

- A single-family infill using active and passive techniques with the goal of being high performance and net zero ready
- Modern and traditional building approaches to achieve this goal
- A striking architectural design taking advantage of the sun



What will people see and learn about at your home?

- Moderate insulation in various applications
- Hybrid heating / cooling approach with zoning
- Air tightness using traditional and leading-edge technology

What are the main things people will see at your home?

- Mechanical equipment
- Home orientation / passive solar heating / lighting

Are there main items that they can't see?

- Insulation: wall / roof / under slab
- Envelope / airtightness





Eco-Solar Home Tour 2020

Westmount EE Home

Why is this home on the tour?

Mysig is the Swedish word for cozy (affording comfort and warmth) and is the overarching theme of this house. Intentionally designed to be simple in form and sophisticated in function to be comfortable all year round. The footprint of the building was designed to have simple lines for ease of construction, insulation and ensuring a tight envelope. The largest roof surface is on the southern plane to maximize a future solar array. Large windows also allow for passive heating and daylighting. Using a combination of active and passive approaches, this house uses a moderate increase in insulation, superior windows and doors and an impressive air tightness. These are supplemented by using high efficiency mechanical equipment, appliances and LED lighting.



What features save on energy costs?

- Large southern roof line - increase solar panel capacity
- Simple form - minimize envelope sealing issues
- Windows – orientation/size to leverage solar gain / passive lighting
- Framing prefabrication - less waste, more precise
- Walls: R32 (Fibreglass batts + exterior EPS)
- Roof: R80 (blown in)
- Under slab: R20 (spray foam)
- Air tightness (ACH = 0.1)
- Traditional vapour barrier with attention to detail and acoustic sealant
- Blower door and thermal imaging building enclosure air leakage assessment
- Aerobarrier air sealant
- Heating/cooling – hybrid approach
- Air source heat pump / high efficiency gas furnace (back-up)
- Zoning system - more control heating/cooling by floor
- Heat Recovery Ventilator - partially dedicated system; less holes in the envelope
- Windows: Triple pane; Dual low-E argon filled
- Appliances: EnergyStar; induction stove
- Lighting: LED

What features save on water costs?

- Low flow faucets / toilets

Other special features

- Metal roof
- Rough in for solar panels and an EV charger